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International Notes Orthopox Surveillance: Post-Smallpox Eradication Policy

Following are excerpts from a report of the World Health Organization (WHO) Committee on Orthopox Virus Infections, which met March 15-17, 1983, supplemented by information from the WHO Smallpox Eradication Unit in December 1983.

Vaccination policy: WHO has been informed that 156 of its 160 member states and associate members have now officially discontinued routine smallpox vaccination. Albania and Chad continue smallpox vaccination. Egypt continues primary vaccination, but revaccination has been discontinued. France has stopped primary vaccination, but revaccination continues. WHO encourages all countries to cease smallpox vaccination, except to protect laboratory workers exposed to orthopox viruses.

Denmark, Finland, the Netherlands, Switzerland, the United Kingdom, and Zimbabwe have informed WHO that smallpox vaccination of military personnel has been discontinued. The Committee expressed hope that other countries will do likewise, since vaccinating such personnel involves risk for both the vaccinees and their contacts. The Committee recommended that military personnel who had been vaccinated be confined to their bases and prevented from contacting unvaccinated persons for 2 weeks after vaccination because of the risk of person-to-person spread. International Certificates of Smallpox Vaccination are no longer required of travelers.

Reserve stocks of smallpox vaccine: WHO has established two refrigerated storage depots for smallpox vaccine (Geneva and New Delhi), with an existing reserve sufficient to vaccinate more than 200 million persons. The stored vaccine is regularly monitored. In addition, substantial quantities of vaccine are held by many member governments.

Investigation of suspected cases: Although the number of rumors of suspected smallpox cases reported to WHO declined from 31 in 1980 to 10 in 1982, 19 more have been reported through December 7, 1983. All cases have been diagnosed as chickenpox or some other nonsmallpox etiology.

Human monkeypox: As of December 7, 1983, 140 human monkeypox cases have been reported since 1970. By year, the numbers of cases are: 1980--three cases; 1981--seven cases; 1982--35 cases; and 1983--32 cases. During 1982, human transmission was

presumed in five episodes, including one in which a third generation of cases was believed to have occurred for the first time. The revised estimate of secondary attack rate among unvaccinated household contacts is about 15%. Although monkeypox is not considered a serious public health problem, continued surveillance of the disease in Zaire was recommended. WHO is also supporting investigation of new serologic tests for monkeypox diagnosis.

Comparative studies of orthopox virus: Work to characterize the genome of variola virus continues. Deoxyribonucleic acid (DNA) fragments, representing three strains of variola virus, have been cloned into recombinant plasmids at the Center for Applied Microbiology and Research, Porton Down, England, and at CDC. Recombinant plasmids are available through WHO, for more detailed analysis of the variola genome, which can be conducted safely outside the maximum containment precautions that apply to intact variola virus. Mapping of cleavage sites for variola is steadily building an extensive profile of variola DNA.

Archives and Publications: Archives of smallpox eradication activities are being collected and indexed. Work has begun on a book dealing comprehensively with relevant scientific operations and administrative aspects of the smallpox eradication program, which WHO will publish in 1985.

Laboratory safety for handling orthopox virus other than variola virus: The only orthopox viruses, other than variola virus, that are documented to cause human infections are vaccinia, monkeypox, and cowpox viruses. Natural human infections with these viruses and person-to-person transmission are rare. Vaccination gives adequate protection against all three viruses, and few laboratory-associated infections with pox viruses other than variola have been reported.

It is appropriate, therefore, that known orthopox viruses, other than variola, be handled as Risk Group II (moderate individual risk, limited community risk) microorganisms, which may be handled in the basic laboratory with the use of biosafety cabinets and other appropriate personal protection (in this case, smallpox vaccination) or physical containment devices, when required. However, if the work on monkeypox virus specifically involves large quantities of the virus or if the work area is not separated from places in which nonhuman primates are maintained, the monkeypox should be handled as Risk Group III (high individual risk, special risk to nonhuman primates, low community risk) microorganisms, in a containment laboratory.

In all cases, all persons working in or entering the laboratory or nonhuman, primate-care area where activities with vaccinia, monkeypox, and cowpox viruses are being conducted should have documented evidence of satisfactory vaccination against smallpox within the preceding 3 years.

Recognition: October 26 has been designated "Smallpox Eradication Day." Beginning in 1984, a medal will be presented in recognition of a recipient's contributions to the control of communicable diseases.

Conclusion: WHO was commended for effectively and diligently implementing the recommendations for the 33rd World Health Assembly regarding activities to be undertaken in the post-smallpox era. Activities beyond 1985 will include the investigation of smallpox rumors, maintenance of smallpox-vaccine reserves, and surveillance of human monkeypox. Reported by WHO Weekly Epidemiological Record, 1983;58:149-54; Evaluation and Research Div, International Health Program Office, CDC.